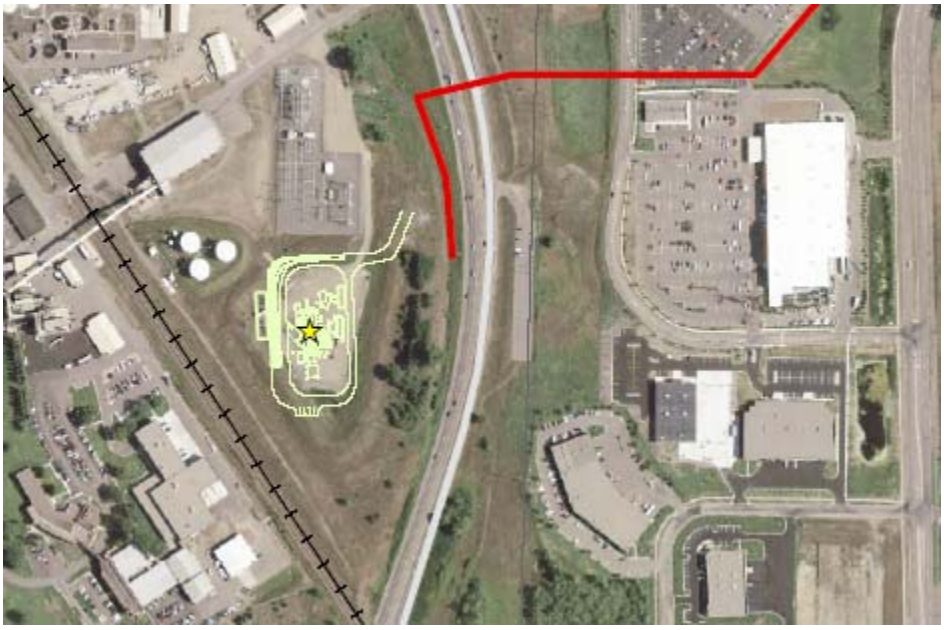
FINAL
ENVIRONMENTAL IMPACT STATEMENT

ELK RIVER PEAKING STATION

PUC DOCKET NO. ET2/GS-07-715



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JANUARY 2008

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Great River Energy
17845 Easy Highway 10; PO Box 800
Elk River, MN 55330

Project Representative
Mark Strohfus, Great River Energy
(763) 241-2272

Abstract

Great River Energy (GRE) has submitted a Large Electric Power Generating Plant (LEPGP) Site permit application for its proposed Elk River Peaking Station project pursuant to the provisions of the Power Plant Siting Act (Minnesota Statutes 116E). The proposed project consists of a single, simple-cycle combustion turbine generator (CT) with a nominal summer generating capacity of 175 MW and other associated facilities. The facility will use natural gas and ultra-low sulfur distillate fuel oil.

The addition of this generating unit at the Elk River site falls within the definition of a Large Electric Power Generating Plant in the Power Plant Siting Act and, thus, requires a Site Permit from the Minnesota Public Utilities Commission (Commission) prior to construction. Minnesota Rules 7849 provide for three different procedures for obtaining a site permit: full review, alternative review, and local review. GRE is applying for a site permit following the full review process. The project is not eligible for the alternative process because the proposed unit will be fueled by both natural gas and fuel oil.

The application will be reviewed under the Full Review Process (Minnesota Rules 7849.5200) of the Power Plant Siting Act (Minnesota Statutes 216E.001 to 216E.18). Under the Full Review Process, an applicant is required to propose an alternative site. The Department of Commerce (Department) Energy Facility Permitting (EFP) staff prepares a document called an Environmental Impact Statement, and a contested cased hearing is required. The Commission has one year to reach a decision under the Full Process from the time the application is accepted.

The preferred project site is on GRE's campus in Elk River, Sherburne County, Minnesota. The Elk River campus currently includes the Elk River Station, a Refuse-Derived-Fuel (RDF) combustor that co-produces electricity, and GRE's corporate offices. The preferred site is an area of approximately 11-acres in the northeast portion of the campus.

An existing 69-kilovolt (kV) transmission line segment extending 5.6 miles in length from the Elk River site will be upgraded with new conductors and new poles. No change in voltage of the existing lines is necessary; therefore, no PUC High Voltage Transmission Line Route Permit is required. No other lines will require upgrades due to the project. GRE will obtain natural gas for the project from Northern Natural Gas Company already serving the campus. Northern Natural Gas will construct and own a new one-half-mile, 12-inch lateral natural gas pipeline off of its existing 16-inch pipeline located northeast of the plant site.

ABSTRACT

The alternative site, required under the full review process, is located on GRE's property in the city of Rosemount in Dakota County, Minnesota. The site is bordered on the south by County Highway 42, on the east by Emery Avenue, on the north by Ehler's Path and 140th Street. The property is currently leased to a farmer for crop production.

The natural gas and electric transmission line interconnects and wastewater discharge lines at the alternative site would require short corridors for completion. The natural gas corridor would extend from the project property south along Emery Avenue for approximately 1000 feet to the existing 42-inch, high pressure pipeline owned by Northern Natural Gas. As with the preferred site, Northern Natural Gas would permit, own and operate the new lateral pipeline.

The plant would be interconnected to an existing transmission line that crosses the site. Water supply would likely be obtained from the existing or new onsite well. Wastewater would be discharged to an Metropolitan Council of Environmental Services (MCES) interceptor at the Rosemount WWTP through a new sewer line constructed along 140th street.

The Department EFP staff released the draft Environmental Impact Statement (DEIS) on November 21, 2007. The DEIS is a written document that describes the human and environmental impacts of a proposed large electric power generating plant (and selected alternative sites) and methods to mitigate such impacts.

Two public information meetings were held on the DEIS, December 19, 2007 (Rosemount) and December 20, 2007 (Elk River). Approximately 7 persons, excluding Department/Commission staff and the applicant's representatives, attended the meetings. The purpose of the public meetings were to provide the public an opportunity to ask questions and present comments on the DEIS. The public had until Monday, December 31, 2007, to submit written comments to the Department on the DEIS.

The only written comments received on the DEIS were from the applicant as part of the direct testimony of Mr. Mark Strohfus.

Persons interested in receiving additional information regarding this matter can register their names on the Project Docket webpage at:

http://energyfacilities.puc.state.mn.us/Docket.html?Id=19178

or by contacting Bill Storm, Energy Facilities Permitting, 85 7th Place East, Suite 500, St. Paul, Minnesota 55101, phone (651) 296-9535, e-mail: bill.storm@state.mn.us.

Many of the documents of interest regarding this matter, including this Environmental Impact Statement, are available online at the above webpage. The final LEPGP Site Permit issued to Great River Energy will also appear on this webpage.

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1.0 DRAFT ENVIRONMENTAL IMPACT STATEMENT

This document incorporates the DEIS by reference; the DEIS, the comments received and the Department's responses constitute the Final Environmental Impact Statement. Minnesota Rule 7849.5300, subpart 9, states that the commissioner of the Department shall respond to the timely substantive comments received on the draft environmental impact statement consistent with the scoping decision and prepare the final environmental impact statement. The commissioner may attach to the draft environmental impact statement the comments received and its response to comments without preparing a separate document.

2.0 COMMENTS RECEIVED on the DEIS

The only comments received on the DEIS were submitted by the applicant as direct testimony; no written comments were received from the general public or other regulatory agencies.

Direct Testimony of Mark Strohfus

On December 31, 2007, Great River Energy (GRE) submitted the direct testimony of Mr. Mark Strohfus, Environmental Project Leader for GRE (**Appendix A**).

In his testimony, Mr. Strohfus had two corrections o the DEIS; they are:

- On page 11 & 12, the public information meetings were held July 31 and August 1, not August 17 and 18, and
- On page 25, the distance to the nearest residence is cited as 1,200 feet. The correct distance is 1,640 feet.

Since the submittal of GRE's Application for a Large Electric Power Generating Plant site permit to the Commission, GRE has concluded that conducting the Prevention of Significant Deterioration (PSD) review for particulate matter (PM) and carbon monoxide (CO) will be required. Mr. Strohfus suggested the following changes to Section 1.8, Air Pollution Control, of the DEIS to reflect this change:

> ***1.8 Air Pollution Control***
> *The project will employ simple cycle combustion turbine technology using both natural gas and fuel oil as the fuel source. The CT will be equipped with Best Available Control Technology (BACT) for NOx, PM and CO emissions.*
>
> *The CT air pollution controls are inherent to its design and so emission performance would not be different if the project were constructed at the preferred or the alternative site. Great River Energy will propose BACT as dry 1ow-NOx combustors when firing natural gas and water injection for NOx control when firing fuel oil. The proposed BACT for PM and CO will be good combustion control.*
>
> *BACT will ultimately be defined by the air emissions permitting process, which is administered by the Minnesota Pollution Control Agency (MPCA). ~~The anticipated permitting approach will be to limit annual operation such that annual emissions of all Prevention and Significant Deterioration (PSD) pollutants except NOx will be less than the PSD significance threshold. Thus, NOx will be the only pollutant to require a BACT analysis.~~ Siting the project at the proposed site will require a major amendment to the existing air permit to incorporate the PSD permit conditions.*

It is appropriate to remove the above two sentences from the last paragraphs because PM and CO will be greater than PSD significance thresholds, which triggered the need for GRE to complete the BACT analyses for PM and CO.

3.0 RESPONSES TO COMMENTS RECEIVED

The Department EFP staff has reviewed the comments on the DEIS made by Mr. Mark Strofhus in his direct testimony and concur with the suggested changes to the DEIS.

APPENDIX A
Direct Testimony
Mark Strohfus, GRE

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BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
600 North Robert Street
St. Paul, Minnesota 55101

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 Seventh Place E, Suite 350
St. Paul, Minnesota 55101

In the Matter of the Application of Great River Energy for a Generating Plant Site Permit	OAH Docket No. 7-2500-19143-2 MPUC Docket No. ET-2/GS-07-715

DIRECT TESTIMONY OF

Mark E. Strohfus

December 31, 2007

BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF MINNESOTA
FOR THE MINNESOTA PUBLIC UTILITIES

DIRECT TESTIMONY OF MARK E. STROHFUS

I. INTRODUCTION

Q. State your name and business address.

A. Mark E. Strohfus, Great River Energy, 17845 East Highway 10, PO Box 800, Elk River, Minnesota, 55330-0800.

Q. By whom are you employed and in what capacity?

A. My present position is Environmental Project Leader for Great River Energy ("GRE"). My primary responsibilities include: 1) understanding the environmental impacts associated with the construction and operation of new generating facilities; 2) interpreting the regulatory requirements applicable to the construction and operation of new generating facilities; and 3) obtaining the environmental approvals required for the construction and operation of new generating facilities (e.g., the Site Permit).

Q. What is your relevant educational and training background?

A. I have a Bachelor of Science degree in paper science and engineering, a specialized field of study in process engineering. I have worked for GRE for the last 8 years. I have served as Environmental Project Leader from 2005 to the present. From 1999 through 2004, I served as GRE's Environmental Policy Analyst evaluating new environmental legislation and regulations and coordinating environmental research projects. Prior to working at GRE, I worked for 12 years as an environmental consultant where I helped clients understand and comply with environmental requirements and obtain environmental approvals and permits.

II PURPOSE AND SUMMARY OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide support for those portions of the Generating Plant Site Permit Application submitted by GRE that relate to the environmental consequences of the proposed facility and necessary permits, and to comment on the Draft Environmental Impact Statement ("EIS").

Q. Please identify the site permit GRE is seeking.

A. GRE is seeking a site permit to construct a simple cycle combustion turbine adjacent to the existing Elk River Station (a refuse derived fuel facility) located in Elk River, Sherburne County Minnesota. The plant is referred to as the Elk River Peaking Station ("ERPS"). The nominal 175-MW (summer capacity) plant is to be placed in service in the spring of 2009.

Q. Has GRE also provided information that would support granting a permit at an alternative location?

A. Yes. As Mr. Vincent Herda explains in his testimony, GRE is required by state law to identify an alternative site for the plant and has done so. That alternative site is located in Rosemount. However, in the absence of significant environmental problems with the Elk River location, the Elk River location is a preferable site for the reasons set forth in Mr. Herda's testimony.. We have not identified any significant environmental issues that would justify selecting the Rosemount site over the Elk River site.

Q. Does your testimony address the related proceeding in which GRE is seeking a certificate of need for the associated peaking plant?

A. No. The certificate of need proceeding is being addressed through a written comment process and is not part of this contested case siting process.

III. SUPPORT FOR THE PERMIT SITING APPLICATION

Q What portions of the Generating Plant Site Permit Application are you supporting through this testimony?

A I am supporting those portions of the Generating Plant Site Permit Application that address the environmental impacts of the proposed project and required permits. More specifically, I am the witness for GRE who is available to address Section 1.4 and Section 4 of the Application.

Q. Are there any significant environmental issues with respect to the Elk River site?

A. No. The plant will be fueled with clean natural gas and ultra low sulfur fuel oil. In addition to the fuel selection, the plant is designed to operate in a manner that minimizes its environmental impacts and ensure that it will comply with all state and federal environmental requirements.

IV. The Draft Environmental Impact Statement

Q. Have you reviewed the Draft Environmental Impact Statement (EIS)?

A. Yes, I have.

Q. Do you have any comments concerning the Draft EIS, and if so what are they?

A. I agree with conclusions contained throughout section 4 of the Draft EIS -- that there are no significant environmental impacts associated with construction and operation of the proposed project at either the preferred or alternative site. I also agree that the air permitting process discussed in section 4.11 and the stormwater management practices discussed in section 4.12 are the only additional mitigative measures necessary to ensure that significant impacts do not occur.

After careful review, GRE identified only the following minor modifications to the Draft EIS that the Department may wish to consider. None of these modifications affect the conclusions in the Draft EIS concerning the environmental consequences of the proposed ERPS or available alternatives.

- Page 11 & 12 - The public information meetings were held July 31 and August 1, not August 17 and 18.

- Page 25 - The distance to the nearest residence is cited as 1,200 feet. The correct distance is 1,640 feet.

The following changes to section 1.8 of the Report, Air Pollution Control (indicated in legislative format), would be appropriate, reflecting that GRE opted to conduct the Prevention of Significant Deterioration (PSD) review for particulate matter (PM) and carbon monoxide (CO) in addition to nitrogen oxides (NOx) as indicated in its application.

1.8 Air Pollution Control

The project will employ simple cycle combustion turbine technology using both natural gas and fuel oil as the fuel source. The CT will be equipped with Best Available Control Technology (BACT) for NOx, PM and CO emissions.

The CT air pollution controls are inherent to its design and so emission performance would not be different if the project were constructed at the preferred or the alternative site. Great River Energy will propose BACT as dry low-NOx combustors when firing natural gas and water injection for NOx control when firing fuel oil. The proposed BACT for PM and CO will be good combustion control.

BACT will ultimately be defined by the air emissions permitting process, which is administered by the Minnesota Pollution Control Agency (MPCA). ~~The anticipated permitting approach will be to limit annual operation such that annual emissions of all Prevention and Significant Deterioration (PSD) pollutants except NOx will be less than the PSD significance threshold. Thus, NOx will be the only pollutant to require a BACT analysis.~~ Siting the project at the proposed site will require a major amendment to the existing air permit to incorporate the PSD permit conditions.

It is appropriate to remove the above two sentences from the last paragraphs because PM and CO will be greater than PSD significance thresholds, which triggered the need for GRE to complete the BACT analyses for PM and CO.

Q. Does this conclude your Direct Testimony?

A. Yes it does.